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DICKSTEIN SHAPIRO LLP
1177 AVENUE OF THE AMERICAS (6TH AVENUE)
NEW YORK, NY 10036-2714

EXAMINER	
RUBIN, BLAKE J	

ART UNIT	PAPER NUMBER
2157	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/599,047	YAMAKAWA ET AL.	
	Examiner	Art Unit	
	BLAKE RUBIN	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/25/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is a response to communications filed September 18, 2006.

2. Claims 1-31 are pending in this application.

3. This application is a national stage entry of PCT/JP04/16947, filed November 15, 2004, which further claims foreign priority to Japanese Patent Application No.2004-080337, filed March 19, 2004.

Specification

4. The disclosure is objected to because of the following informalities: page 15, lines 25 should read, "(step S4)", and page 35, line 7 should read, "(Network Lock Manager)". Appropriate correction is required.

Drawings

5. The drawings are objected to because Figure 3, Step 7 should read, "transfer data of session established before seamlessly introducing intermediate device ~~ongoingly~~..." Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes

made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claims 1, 11, 21 and 31 recite "the data" in lines 15 and 21. There is insufficient antecedent basis for these limitations in the claims. The examiner recommends amending the claims to recite, "the data of said information processing service." Appropriate correction is required.

7. Claims 5, 15, and 25 recite "the data" in line 11. There is insufficient antecedent basis for these limitations in the claims. The examiner recommends amending the claims to recite, "the data of said information processing service." Appropriate correction is required.

8. Claims 7, 17, and 27 recite "the operator" in line 2. There is insufficient antecedent basis for these limitations in the claims. The examiner recommends amending the claims to recite, "an operator." Appropriate correction is required.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 21-31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

11. With respect to independent claims 21, and 31, the claims recite a "program" (lines 1), which is considered functional descriptive material, not embodied in computer readable media. Where the claims recite, "enabling said computer to perform," (lines 6) the claim fails to provide a relationship towards a physical medium on which the program is stored. See MPEP 2106.01:

a. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional

interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

12. A necessary interrelationship between structural and functional embodiments "program" is necessary to be considered statutory subject matter.

13. With respect to dependent claims 22-30, the claims fail to resolve the deficiencies of the independent claims from which they are drawn from, and are rejected on the grounds mentioned above.

Claim Rejections - 35 USC § 112

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 5, 15, and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

16. With respect to claims 5, 15, and 25, the claims recite, "a new session" (lines 7-8), it is not clear how this limitation is related to the previously mentioned "a new session" in claims 1, 11, and 21 respectively (line 20), which renders the claims indefinite. The examiner suggests amending line 20 to recite, "said new session" to resolve the indefiniteness. Appropriate correction is required.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18. Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al (U.S. Patent No. 6,601,101, hereinafter Lee).

19. With respect to claim 1, Lee discloses an intermediate device (column 5, line 51, *switch*; Figure 1A, **120**) adapted to be provided between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing an information processing service (column 5, line 54-56) through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) for receiving said information processing service (column 5, line 54-56), for providing an intermediate service additional to said information processing service (column 6, lines 42-45, *logic to process messages*), comprising: state information acquiring means for acquiring state information (column 6, lines 20-23, *receives a report*) required to maintain the state of a session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second

information processing device (column 9, lines 2-3) for said information processing service (column 9, lines 1-2), from said first information processing device (column 9, lines 2-3) or said second information processing device (column 9, lines 2-3); intermediate service managing means for generating, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transferring the data to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and transfer control means for maintaining the state of said existing session (column 6, lines 20-23, *forwarding table*) established between said first information processing device and said second information processing device (column 6, lines 12-14), between itself and said second information processing device (column 6, lines 18-20), establishing a new session between itself and said first information processing device (column 6, lines 25-28), and transferring said data using said existing session and said new session (column 6, lines 34-38), according to said transfer rules (column 6, lines 34-38, *upon completion of the handoff*).

20. With respect to claim 2. An intermediate device according to claim 1, wherein said state information acquiring means has session monitoring means for acquiring session information (column 8, lines 14-18, *EAP*) inherent in said session sent and received between said first information processing device and said second information

processing device (column 8, lines 25-29), as part of said state information (column 8, lines 25-29).

21. With respect to claim 3. An intermediate device according to claim 1, wherein said state information acquiring means has information collecting means for acquiring service inherent information inherent in said information processing service as part of said state information (column 5, lines 66-67, *primary endpoint*) by inquiring at said first information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*).

22. With respect to claim 4. An intermediate device according to claim 3, wherein said state information acquiring means inquires at said first information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*) about accessing object identifying information assigned to identify respective accessing objects on said first information processing device (column 5, lines 66-67, *primary endpoint*), with respect to a plurality of said accessing objects (column 6, lines 8-11, *a first or second device*), and extracts a regularity common to a plurality of obtained items of said accessing object identifying information (column 5, lines 66-67, *virtual IP address*), thereby acquiring, as part of said service inherent information, a device identifier for identifying said first information processing device having said accessing objects (column 5, lines 66-67, *virtual IP address*).

23. With respect to claim 5. An intermediate device according to claim 1, wherein said transfer control means has an operation mode for transferring data of the existing session between said first information processing device and said second information processing device without the data being subjected to said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*), and an operation mode for establishing sessions between the intermediate device and both said second information processing device and said first information processing device when a new session of said information processing service is requested (column 7, lines 11-14, *client request*) to be established by said second information processing device (column 7, lines 11-14, *the switch…identifies*), applying said intermediate service to the data of said information processing service using said sessions, and transferring said data (column 9, lines 2-5).

24. With respect to claim 6. An intermediate device according to claim 1, wherein said state information acquiring means has cancellation control means (column 8, lines 1-4) for issuing a command for temporarily nullifying (column 8, lines 2-4) and reestablishing said session to said first information processing device and said second information processing device (column 8, lines 5-8, *return a handoff*), and acquires said state information in a process of reestablishing the session according to said command (column 9, lines 18-20).

25. With respect to claim 7. An intermediate device according to claim 1, wherein said intermediate service has contents registered (column 1, lines 62-64) in advance by the operator (column 1, lines 62-64; column 2, lines 3-6, where *the IP stacks must be changed* requires the mediation of an operator).

26. With respect to claim 8. An intermediate device according to claim 7, wherein said information processing service comprises a service for allowing said second information processing device to access a resource on said first information processing device (column 7, lines 11-14), and said intermediate service comprises a service for changing the access from said second information processing device to the resource on said first information processing device to convert an access destination (column 7, lines 11-14).

27. With respect to claim 9. An intermediate device according to claim 7, wherein said information processing service comprises a service for allowing said second information processing device to access a WEB page on said first information processing device (column 6, line 48), and said intermediate service comprises a service for integrating said information processing services provided by a plurality of said first information processing devices (column 16, lines 61-64, *clients*) and providing the integrated information processing services to said second information processing device (column 16, lines 61-64, *thin server*).

28. With respect to claim 10. An intermediate device according to claim 1, wherein when said intermediate service ends being provided (column 8, lines 2-4, *terminates its participation*), said transfer control means: when requested to newly establish a session of said information processing service from said second information processing device (column 8, lines 4-7, *return a handoff*), transfers the data between said second information processing device and said first information processing device (column 8, lines 4-7, *session proceeds*), thereby establishing a session directly between said first information processing device and said second information processing device (column 8, lines 4-7, *session proceeds*) while exempting the data from said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*); and with respect to said information processing service which has already been provided, continuously transfers the data to which said intermediate service is applied using a session between itself and said first information processing device and a session between itself (column 13, lines 1-4) and said second information processing device (column 13, lines 1-4), until said second information processing device ends employing said information processing service (column 8, lines 7-8).

29. With respect to claim 11. A service providing method of providing an intermediate service (column 6, lines 42-45, *logic to process messages*) additional to an information processing service (column 5, line 54-56) with an intermediate device (column 5, line 51, *switch*; Figure 1A, **120**) which is provided between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing said information

processing service through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) for receiving said information processing service, comprising: the first step of controlling said intermediate device provided between said first information processing device and said second information processing device to acquire state information (column 6, lines 20-23, *receives a report*) required to maintain the state of a session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device (column 9, lines 2-3) for said information processing service (column 9, lines 1-2), from said first information processing device or said second information processing device (column 9, lines 2-3); the second step of controlling said intermediate device to generate, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transferring the data to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and the third step of controlling said intermediate device to maintain the state of said existing session (column 6, lines 20-23, *forwarding table*) established between said first information processing device and said second information processing device (column 6, lines 12-14), between said intermediate device and said second information processing device (column 6, lines 18-20), establish a new session between said intermediate device and said first information processing device (column 6, lines 25-28),

and transfer said data using said existing session and said new session (column 6, lines 34-38), according to said transfer rules (column 6, lines 34-38, *upon completion of the handoff*).

30. With respect to claim 12. A service providing method according to claim 11, wherein in said first step, said intermediate device acquires session information (column 8, lines 14-18, *EAP*) inherent in said session sent and received between said first information processing device and said second information processing device (column 8, lines 25-29), as part of said state information (column 8, lines 25-29).

31. With respect to claim 13. A service providing method according to claim 11, wherein in said first step, said intermediate device acquires service inherent information inherent in said information processing service as part of said state information (column 5, lines 66-67, *primary endpoint*) by inquiring at said first information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*).

32. With respect to claim 14. A service providing method according to claim 13, wherein said intermediate device inquires at said first information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*) about accessing object identifying information assigned to identify respective accessing objects on said first information processing device (column 5, lines 66-67,

primary endpoint), with respect to a plurality of said accessing objects (column 6, lines 8-11, *a first or second device*), and extracts a regularity common to a plurality of obtained items of said accessing object identifying information (column 5, lines 66-67, *virtual IP address*), thereby acquiring, as part of said service inherent information, a device identifier for identifying said first information processing device having said accessing objects (column 5, lines 66-67, *virtual IP address*).

33. With respect to claim 15. A service providing method according to claim 11, wherein in said first step, when all said state information which is required cannot be acquired, said intermediate device transfers data of the existing session between said first information processing device and said second information processing device without the data being subjected to said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*), and when a new session of said information processing service is requested to be established by said second information processing device (column 7, lines 11-14, *client requests*), said intermediate device establishes sessions between the intermediate device and both said second information processing device and said first information processing device (column 7, lines 11-14, *the switch…identifies*), applies said intermediate service to the data of said information processing service using said sessions, and transfers said data (column 9, lines 2-5).

34. With respect to claim 16. A service providing method according to claim 11, wherein in said first step, said intermediate device issues a command for temporarily

nullifying (column 8, lines 1-4) and reestablishing said session to said first information processing device and said second information processing device (column 8, lines 5-8, *return a handoff*), and acquires said state information in a process of reestablishing the session (column 9, lines 18-20).

35. With respect to claim 17. A service providing method according to claim 11, wherein said intermediate service has contents registered in advance (column 1, lines 62-64) in said intermediate device by the operator (column 1, lines 62-64; column 2, lines 3-6, where *the IP stacks must be changed* requires the mediation of an operator).

36. With respect to claim 18. A service providing method according to claim 17, wherein said information processing service comprises a service for allowing said second information processing device to access a resource on said first information processing device (column 7, lines 11-14), and said intermediate service comprises a service for changing the access from said second information processing device to the resource on said first information processing device to convert an access destination (column 7, lines 11-14).

37. With respect to claim 19. A service providing method according to claim 17, wherein said information processing service comprises a service for allowing said second information processing device to access a WEB page on said first information processing device (column 6, line 48), and said intermediate service comprises a

service for integrating said information processing services provided by a plurality of said first information processing devices (column 16, lines 61-64, *clients*) and providing the integrated information processing services to said second information processing device (column 16, lines 61-64, *thin server*).

38. With respect to claim 20. A service providing method according to claim 11, further comprising: the fourth step of, when said intermediate service ends being provided (column 8, lines 2-4, *terminates its participation*) and when requested to newly establish a session of said information processing service from said second information processing device (column 8, lines 4-7, *return a handoff*), transferring the data between said second information processing device and said first information processing device (column 8, lines 4-7, *session proceeds*), thereby establishing a session directly between said first information processing device and said second information processing device (column 8, lines 4-7, *session proceeds*) while exempting the data from said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*); and the fifth step of, with respect to said information processing service which has already been provided, continuously transferring the data to which said intermediate service is applied using a session between said intermediate device and said first information processing device (column 13, lines 1-4) and a session between said intermediate device and said second information processing device (column 13, lines 1-4), until said second information processing device ends employing said information processing service (column 8, lines 7-8).

39. With respect to claim 21. A service providing program for providing an intermediate service (column 6, lines 42-45, *logic to process messages*) additional to an information processing service (column 5, line 54-56) by being executed by a computer (column 5, line 51, *switch*; Figure 1A, **120**) which is provided between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing said information processing service through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) for receiving said information processing service, said program enabling said computer to perform: a first process of controlling state information acquiring means (column 6, lines 20-23, *received a report*) to acquire state information required to maintain the state of a session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device (column 9, lines 2-3) for said information processing service (column 9, lines 1-2), from said first information processing device or said second information processing device (column 9, lines 2-3); a second process of controlling intermediate service managing means to generate, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transfer the data to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and a third process of controlling

transfer control means to maintain the state of said existing session (column 6, lines 20-23, *forwarding table*) established between said first information processing device and said second information processing device (column 6, lines 12-14), between itself and said second information processing device (column 6, lines 18-20), establish a new session between itself and said first information processing device (column 6, lines 25-28), and transfer said data using said existing session and said new session (column 6, lines 34-38), according to said transfer rules (column 6, lines 34-38, *upon completion of the handoff*).

40. With respect to claim 22. A service providing program according to claim 21, wherein in said first process, session information (column 8, lines 14-18, *EAP*) inherent in said session sent and received between said first information processing device and said second information processing device is acquired as part of said state information (column 8, lines 25-29).

41. With respect to claim 23. A service providing program according to claim 21, wherein in said first process, service inherent information inherent in said information processing service (column 5, lines 66-67, *primary endpoint*) is acquired as part of said state information by inquiring at said first information processing device or said second information processing device (column 5, lines 66-67, *intercept the initial request*).

42. With respect to claim 24. A service providing program according to claim 23, wherein said first information processing device or said second information processing device are inquired at (column 5, lines 66-67, *intercept the initial request*) about accessing object identifying information assigned to identify respective accessing objects on said first information processing device (column 5, lines 66-67, *primary endpoint*), with respect to a plurality of said accessing objects (column 6, lines 8-11, *a first or second device*), and a regularity common to a plurality of obtained items of said accessing object identifying information are extracted (column 5, lines 66-67, *virtual IP address*), thereby acquiring, as part of said service inherent information, a device identifier for identifying said first information processing device having said accessing objects (column 5, lines 66-67, *virtual IP address*).

43. With respect to claim 25. A service providing program according to claim 21, wherein in said first process, when all said state information which is required cannot be acquired, said transfer control means transfers data of the existing session between said first information processing device and said second information processing device without the data being subjected to said intermediate service (column 6, lines 8-11, *bypassing the processor of the switch*), and when a new session of said information processing service is requested to be established by said second information processing device (column 7, lines 11-14, *client requests*), said transfer control means establishes sessions between the transfer control means and both said second information processing device and said first information processing device (column 7,

lines 11-14, *the switch…identifies*), applies said intermediate service to the data of said information processing service using said sessions, and transfers said data (column 9, lines 2-5).

44. With respect to claim 26. A service providing program according to claim 21, wherein in said first process, cancellation control means issues a command for temporarily nullifying (column 8, lines 1-4) and reestablishing said session to said first information processing device and said second information processing device (column 8, lines 5-8, *return a handoff*), and said state information acquiring means acquires said state information in a process of reestablishing the session (column 9, lines 18-20).

45. With respect to claim 27. A service providing program according to claim 21, wherein said intermediate service has contents registered in advance (column 1, lines 62-64) in said intermediate device by the operator (column 1, lines 62-64; column 2, lines 3-6, where *the IP stacks must be changed* requires the mediation of an operator)..

46. With respect to claim 28. A service providing program according to claim 27, wherein said information processing service comprises a service for allowing said second information processing device to access a resource on said first information processing device (column 7, lines 11-14), and said intermediate service comprises a service for changing the access from said second information processing device to the

resource on said first information processing device to convert an access destination (column 7, lines 11-14).

47. With respect to claim 29. A service providing program according to claim 27, wherein said information processing service comprises a service for allowing said second information processing device to access a WEB page (column 6, line 48) on said first information processing device, and said intermediate service comprises a service for integrating said information processing services provided by a plurality of said first information processing devices (column 16, lines 61-64, *clients*) and providing the integrated information processing services to said second information processing device (column 16, lines 61-64, *thin server*).

48. With respect to claim 30. A service providing program according to claim 21, further comprising: a fourth process of, when said intermediate service ends being provided (column 8, lines 2-4, *terminates its participation*) and when requested to newly establish a session of said information processing service from said second information processing device (column 8, lines 4-7, *return a handoff*), controlling said transfer control means to transfer the data between said second information processing device and said first information processing device (column 8, lines 4-7, *session proceeds*), thereby establishing a session directly between said first information processing device and said second information processing device (column 8, lines 4-7, *session proceeds*) while exempting the data from said intermediate service (column 6, lines 8-11,

bypassing the processor of the switch); and a fifth process of, with respect to said information processing service which has already been provided, controlling said transfer control means to continuously transfer the data to which said intermediate service is applied using a session between itself and said first information processing device (column 13, lines 1-4) and a session between itself and said second information processing device (column 13, lines 1-4), until said second information processing device ends employing said information processing service (column 8, lines 7-8).

49. With respect to claim 31. A service providing program (column 5, line 54-56) for being executed by a computer (column 5, line 51, *switch*; Figure 1A, **120**) to provide an intermediate service (column 6, lines 42-45, *logic to process messages*) additional to an information processing service (column 5, line 54-56) between a first information processing device (column 5, line 50, *client*; Figure 1A, **110**) for providing said information processing service through a network (column 6, lines 47-48) and a second information processing device (column 6, line 13, *second device*, Figure 1B, **135**) for receiving said information processing service, said program enabling said computer to perform: a first process of acquiring state information (column 6, lines 20-23, *receives a report*) required to maintain the state of a session (column 9, lines 5-13, *switch forwarding tables are updated*) established between said first information processing device and said second information processing device (column 9, lines 2-3) for said information processing service (column 9, lines 1-2), from said first information processing device or said second information processing device (column 9, lines 2-3); a

second process of generating, based on said state information, transfer rules (column 19, lines 63-67, *load balancing*) for applying said intermediate service to data of said information processing service which is sent and received between said first information processing device and said second information processing device (column 20, lines 1-4), and transferring the data to which said intermediate service is applied (column 20, lines 20-23, *fastpath to an available disk*); and a third process of maintaining the state of said existing session (column 6, lines 20-23, *forwarding table*) established between said first information processing device and said second information processing device (column 6, lines 12-14), between itself and said second information processing device (column 6, lines 18-20), establishing a new session between itself and said first information processing device (column 6, lines 25-28), and transferring said data using said existing session and said new session (column 6, lines 34-38), according to said transfer rules (column 6, lines 34-38, *upon completion of the handoff*).

Conclusion

50. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a. Starr et al Patent No. 6,807,581

b. Wang et al Patent No. 6,826,613

c. Gole Patent No. 7,171,452

d. Clark et al Patent No. 7,254,611

e. Ball et al Patent No. 6,446,200

51. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLAKE RUBIN whose telephone number is (571) 270-3802. The examiner can normally be reached on M-R: 8:00-5:00.

52. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

53. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BJR

/Ario Etienne/
Supervisory Patent Examiner, Art Unit 2157